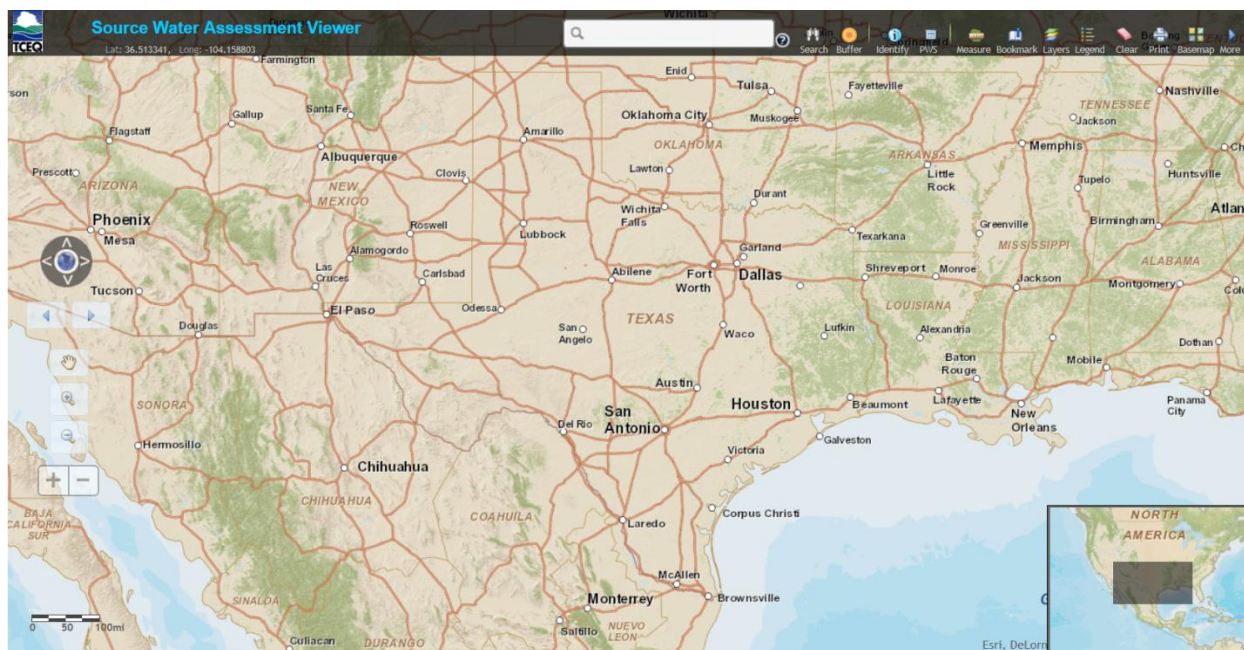


Source Water Assessment Viewer – User Guide



The **Source Water Assessment Viewer** allows the public to view the spatial datasets used and created during the source water susceptibility assessment process. More than 6,000 Public Water Systems (PWS) are the primary audience. Agency staff, consultants, and the general public constitute the secondary audience.

The Viewer enables internal and external customers to view PWS wells and intakes along with the PSOC and contributing zones used for source water assessments.

It allows users to perform multiple functions, such as: 1) Access to PWS source assessment information; 2) View and print maps of source water protection areas and associated PSOC; and 3) Obtain more details about the selected public water source.

Software requirement:

The Edwards Aquifer Map Viewer has been tested and works fine in the following Web browsers:

- Microsoft Internet Explorer: Version 9 and above
- Mozilla Firefox: Version 21.0 and above
- Google Chrome: Version 30 and above

Please update your Web browsers to the newer version if some tools in the viewer do not work well for you.

The OAS/Information Resources Division (IRD)/Enterprise Support Section (ESS)/GIS Team created and maintains this application.

Date Updated: February 6, 2014

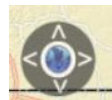
Table of Contents

Navigation Tools	3
Map Extent Window	4
Toolbar	5
Latitude-Longitude Coordinates	5
Search Tool	5
Functional Tools	6
Search	6
Buffer	7
Identify	8
PWS	9
Measure	11
Bookmark	13
Layers	14
Legend	14
Clear	14
Print	15
Basemap	16
More	17

Navigation Tools

The viewer will open to a full view of the state of Texas.

Basic navigation tools are provided on the left side of the screen.



Pan (Direction) Tool: Click on the arrows to move the map display in the desired direction.

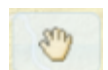
Click on the **Full Extent** (globe) symbol to return to the full view of the state of Texas.



Previous Tool: Click on this button to go back to the previous map view.



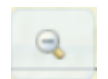
Next Tool: Click on this button to return to the view you created before you click on the “Previous” tool.



Pan Tool: This tool allows you to pan over the map by dragging the display in any direction with the mouse. To use this tool, move the cursor to any desired location, hold down the left mouse button, and drag the display in any direction. (When you open the map viewer, the cursor defaults to this function.)



Zoom In (Select) Tool: This tool allows you to zoom in on the map to a more detailed view of a selected area. The area displayed is based on the outer boundary of the box that you draw.



Zoom Out (Select) Tool: This tool allows you to zoom out from the area displayed on the map. The area displayed is based on the extent of the box you draw.

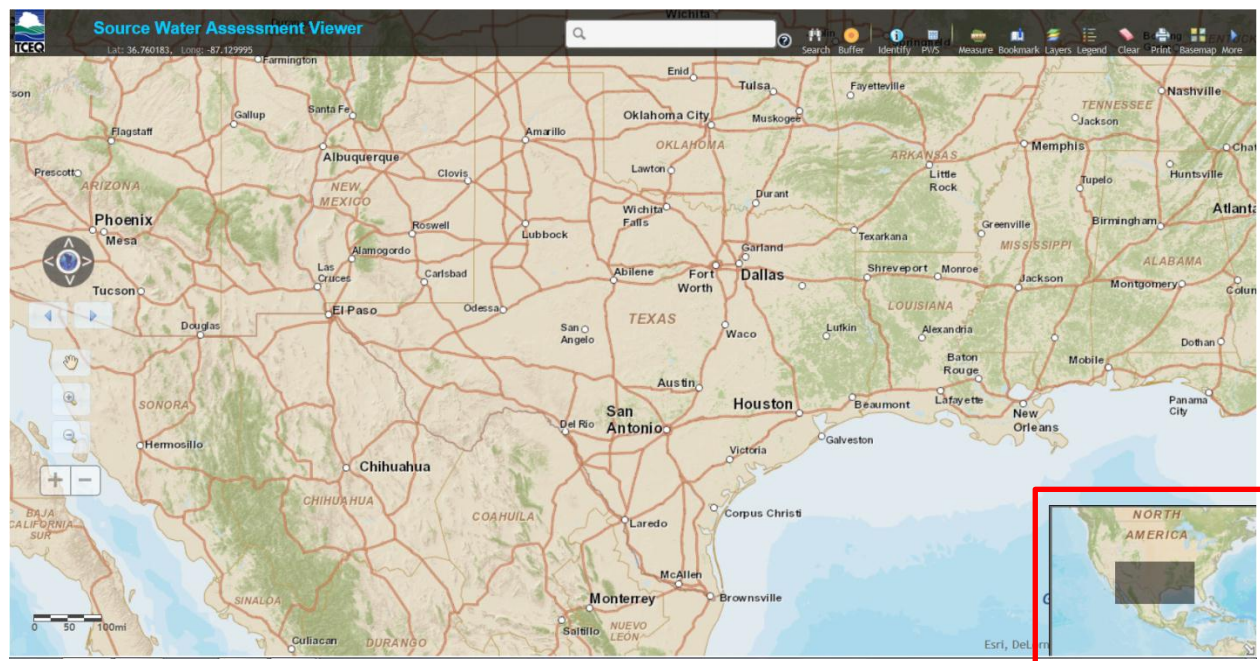


Zoom (Fixed) Tools: Clicking on the plus (+) sign causes the entire view to zoom in for a fixed distance. Clicking on the minus (-) sign causes the entire view to zoom out for a fixed distance. Unlike the **Zoom In/Out (Select) Tools**, you cannot specify the area you wish to zoom in and out of.



Map Extent Window

The Map Extent window is located in the lower right hand corner of the display. It displays a larger geographic area than the viewer display. The grey rectangle in the window corresponds to the area represented in the viewer display.



To change the area shown in the viewer display, click on the grey rectangle and drag it to the area of interest.

You can make the Map Extent Window appear or disappear by toggling on the arrow in the lower right hand corner of the window.

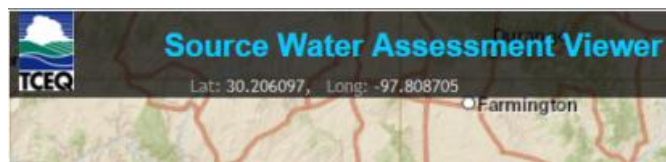
Toolbar



The toolbar at the top of the display offers multiple tools.

Latitude-Longitude Coordinates

On the left side of the tool bar, the geographic coordinates for the location of the cursor are continuously displayed in decimal degrees.



Search Tool

In the center of the tool bar, the Search tool allows you to zoom to a specific location.

Clicking on the question mark (?) to the right of the search tool window opens the **How to use this Search tool?** Window; the contents are displayed below:



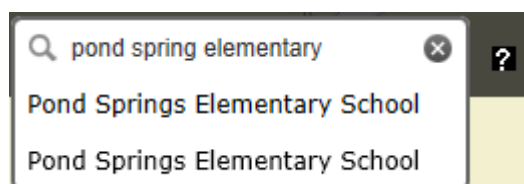
How to use this Search tool?

You can search a location by typing in one of following criteria in the search box (not case-sensitive).

The dropdown list will be auto-completed when you type. [See examples in blue:](#)

Note: the address search function works for the whole country. Therefore, to make the search result to be accurate, please include the city name when you search an intersection or a POI. [Point of Interest]

- Search by **County Name:** [Travis county](#)
- Search by **City Name:** [Austin](#)
- Search by **Address:** [1111 6th St W, Austin, TX, 78703](#)
- Search by **Intersection:** [McNeil Dr & Parmer ln](#)
- Search by **Latitude/longitude:** [-97.2, 30.4](#)
- Search by **POI (Point Of Interest: school, park, mall, hospital, etc.):** [pond springs elementary](#)

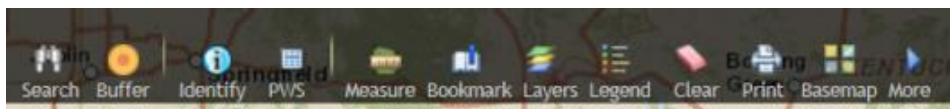


After you enter the search criteria, click on the magnifying glass in the left side of the window to execute the search.

When complete, click on the **X** in the right side of the window to clear the search.

Functional Tools

Multiple functional tools are provided on the right side of the tool bar.



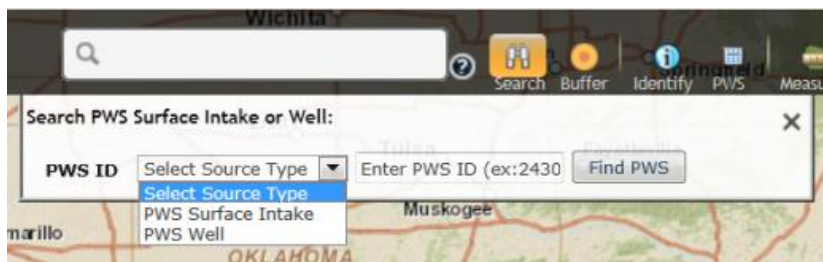
Search

This tool allows you to search for a specific PWS Surface Intake or Well.

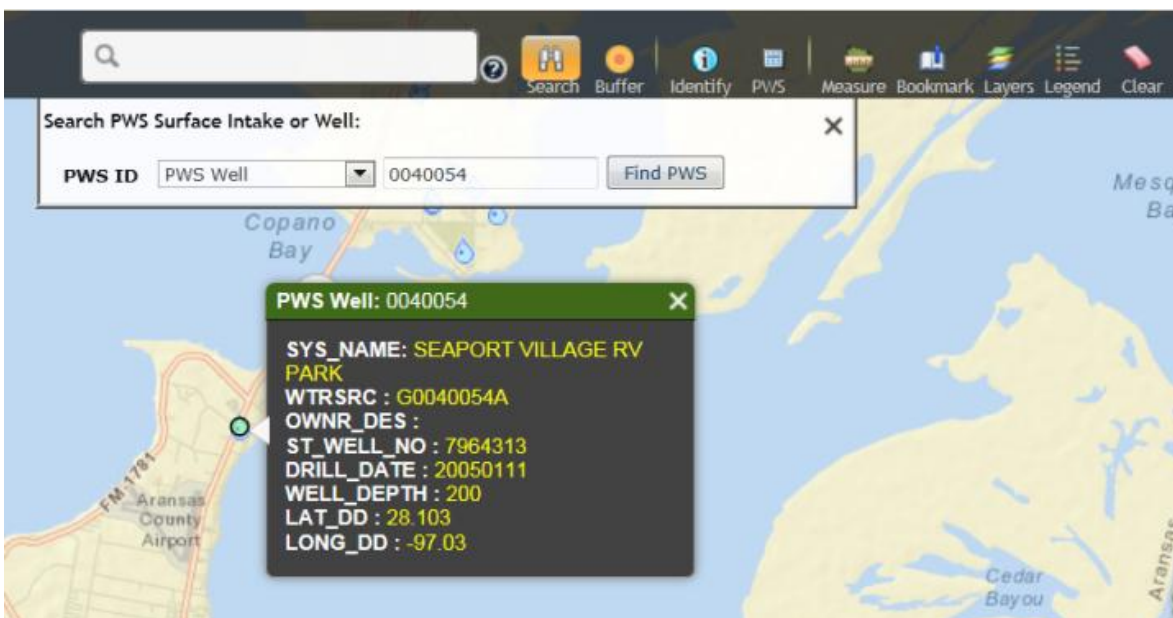
Clicking on this tool displays a **Search PWS Surface Intake or Well** window.

To make a search:

1. Select the Source Type (PWS Surface Intake or PWS Well) from the dropdown menu.
2. Enter the PWS ID in the space provided. (The PWS ID must be a 7-digit number.)
3. Click on the **Find PWS** button.



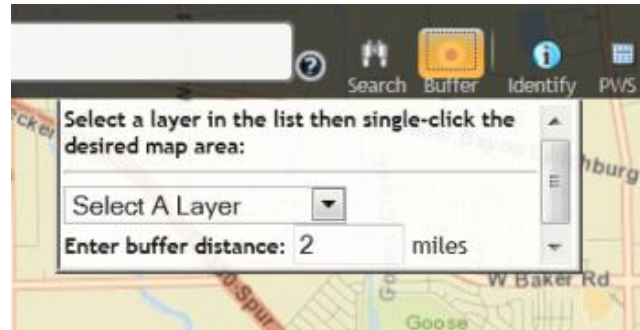
For example, searching for a PWS Well with a PWS ID of 0040054 will yield the results displayed below:



● Buffer

This tool allows you to create a buffer around the layer you select, and to display a list of locations that fall within that buffer.

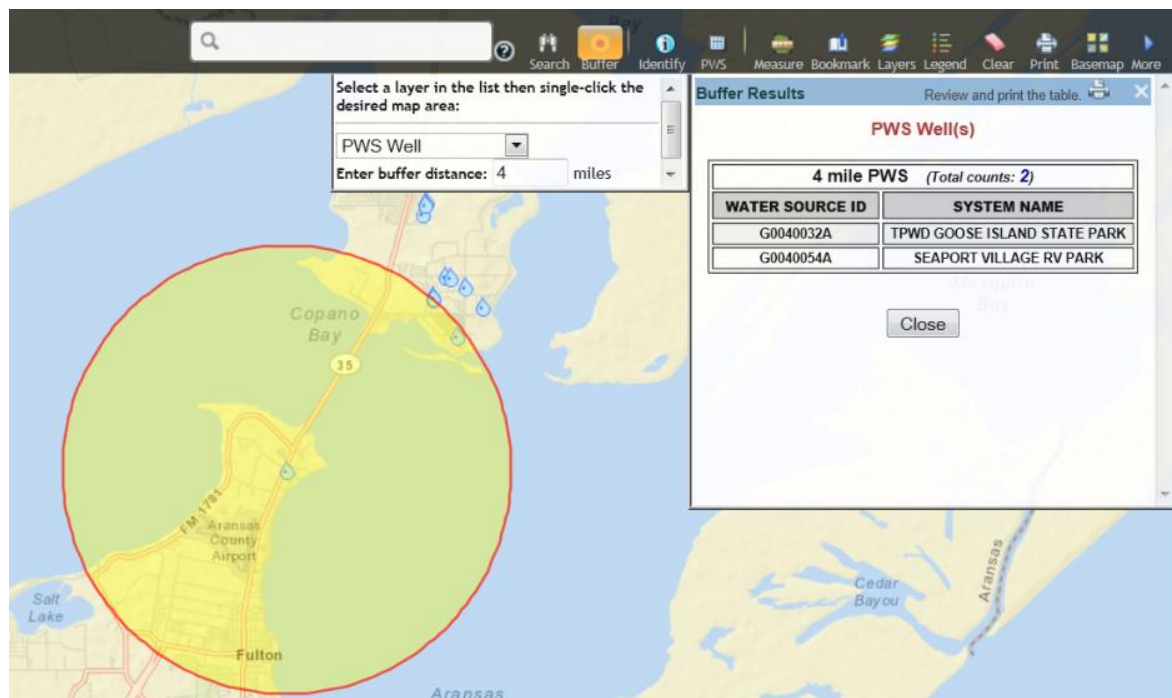
Clicking on this tool displays a window in which you can select the layer (either **PWS Well** or **PWS Well Intake**) and set the buffer distance.



To display either **PWS Wells** or **PWS Well Intakes**:

- First, display these layers by selecting them from the **Layers** dropdown menu (described on page 14).
- Next, zoom in to the area of interest until the layer appears. (You may also zoom to a particular well or intake using the **Search** tool described on page 6.)
- Select the layer from the dropdown menu and enter the buffer distance you want.
- Finally, click on the desired well or intake to create a buffer around it.

Continuing to use the PWS Well with a PWS ID of 0040054 on page 6, the example below displays a 4 mile buffer around the selected well (PWS ID 0040054). Only one well (PWS ID 0040032: TPWD Goose Island State Park) falls within that buffer.



Identify

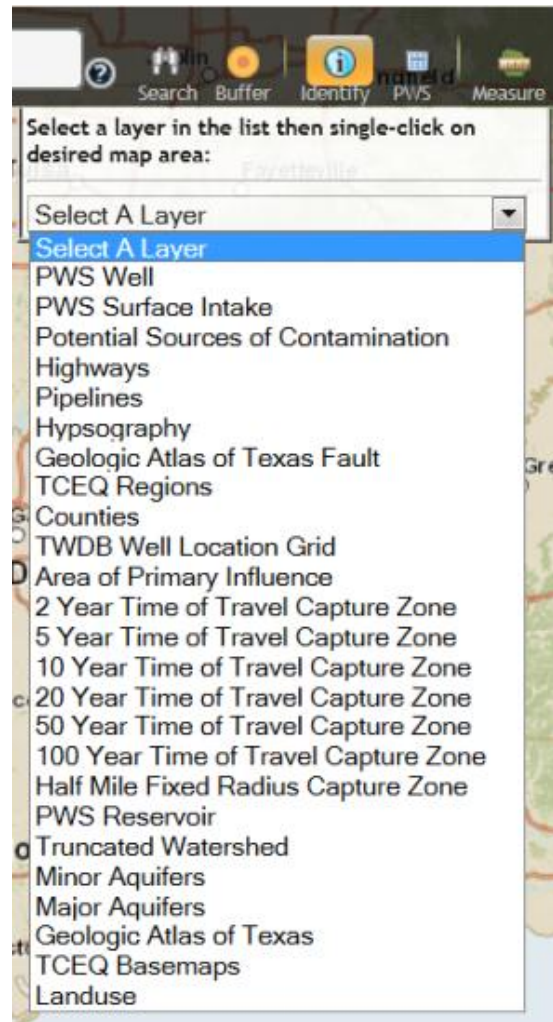
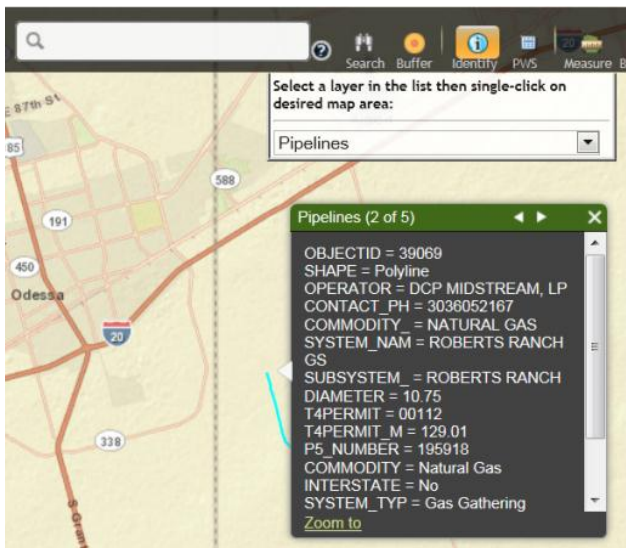
This tool allows you to identify visible features on the map.

Clicking on the tool displays a menu of layers you can identify.

After you select the layer, click on the map.

The viewer will highlight the feature (point, line, or polygon) in light blue and will display an information window about the feature.

The example below displays information about a natural gas pipeline southeast of Odessa.



PWS

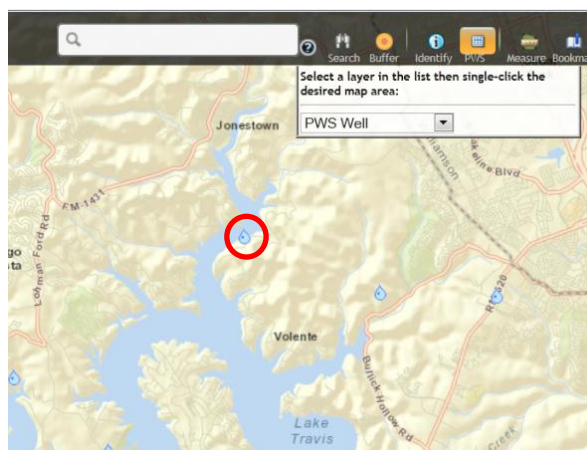
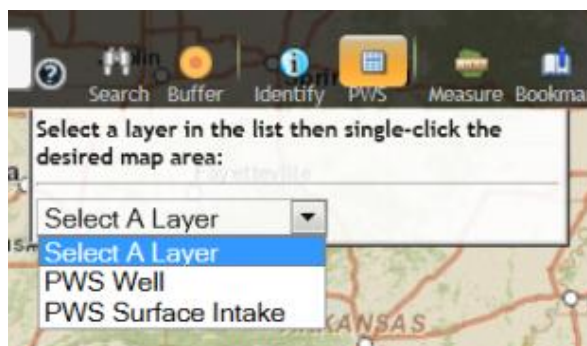
This tool allows you to access specific records for either the **PWS Well** or **PWS Surface Intake** layer.

To use this tool, you must first use the **Layers** dropdown menu (described on page 14) to display either the **PWS Well** or **PWS Surface Intake** layer.

You must then zoom in to the area of interest until the layer appears on the viewer.

You may then use the PWS tool to specify the layer of interest, and do a left mouse click on a specific well or intake to display its record.

In the example to the right, clicking on the PWS well for the Sandy Creek Yacht Club (Water System Number TX2270339) displays the Office of Water – Water System Search report on a separate web page (displayed below).



Texas Commission on Environmental Quality County Map of TX		Office of Water Water System Search		Public Drinking Water Section Office of Compliance and Enforcement	
Water System No.	Water System Name	Type	Status	Pri. Cnty Served	Pri. Src. Water Type
TX2270339	SANDY CREEK YACHT CLUB Fact Sheet	NC	A	TRAVIS	GW

Total Number of Records Fetched = 1

Clicking on the **Water System No. (TX2270339)** produces a more detailed report:

Texas Commission on Environmental Quality		Office of Water		Public Drinking Water Section	
County Map of TX		Water System Search		Office of Compliance and Enforcement	
Water System Detail					
Water System Facilities		Violations	Enforcement Actions	TCR Sample Results	TTHM HAA5 Summaries
Source Water Assessment Results		Assistance Actions		Recent Positive TCR Results	PBCU Summaries
Sample Points		Compliance Schedules		Other Chemical Results	Chlorine Summaries
Sample Schedules / FANLS / Plans				Chemical Results: Sort by: Name	Turbidity Summaries
Site Visits	Milestones	TOC/Alkalinity Results		Code	
Operators	All POC	LRAA (TTHM/HAA5)		Recent Non-TCR Sample Results	TCR Sample Summaries
Glossary					
Water System Detail Information					
Water System No.:	TX2270339			System Type:	NC
Water System Name:	SANDY CREEK YACHT CLUB			Primary Source Type:	GW
Principal County Served:	TRAVIS			System Status:	A
Principal City Served:				Activity Date:	01-01-1913
Population:	390			System Recognition:	NO DATA
Water System Contacts					
Type	Contact		Communication		
AC - Administrative Contact	SCARDINO, JOHN 2101 LAKEWAY BLVD STE 205 AUSTIN, TX 78734-5272		Electronic Type	Value	
			EMAIL - Email	TSANSOM@LEGENDCOMMUNITIESINC.COM	
			Phone Type	Value	
			BUS - Business	512-306-1444	

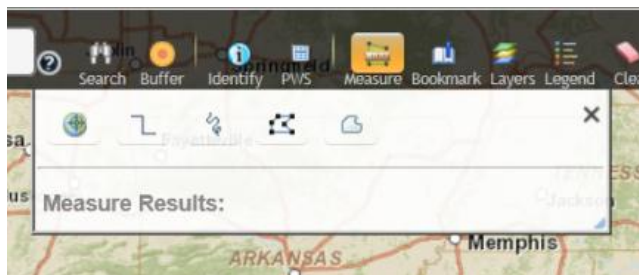
Clicking on the **Water System Name** [Fact Sheet](#) also produces a more detailed report:


Water System Detail Information					
Water System No.:		TX2270339	Federal Type:		NC
Water System Name:		SANDY CREEK YACHT CLUB	Federal Source:		GW
Principal County Served:		TRAVIS	System Status:		A
Principal City Served:			Activity Date:		01-01-1913
Water System Contacts					
Type	Contact		Communication		
AC - Administrative Contact	SCARDINO, JOHN 2101 LAKEWAY BLVD STE 205 AUSTIN, TX 78734-5272		Electronic Type	Value	
			EMAIL - Email	TSANSOM@LEGENDCOMMUNITIESINC.COM	
			Phone Type	Value	
			BUS - Business	512-306-1444	
Annual Operating Period(s)					
Eff. Begin Date	Eff. End Date	Start Month/Day	End Month/Day	Type	Population
03-06-2008	No End Date	1/1	12/31	T	390
Service Connection(s)					
Type	Count	Meter Type		Meter Size	
CM	130	UM		0	
Service Area(s)					
Code			Name		
T			RECREATION AREA		
System Certification Requirements					
Certification Name		Code		Begin Date	
Water System Facilities					
Fac. ID	Facility Name	Type Status Avail.	Unit Process Name Treatment Objective Name Treatment Process Name		
DS01	DISTRIBUTION SYSTEM	DS - A - P			
PF11999	PUMP HOUSE	PF - A - P			

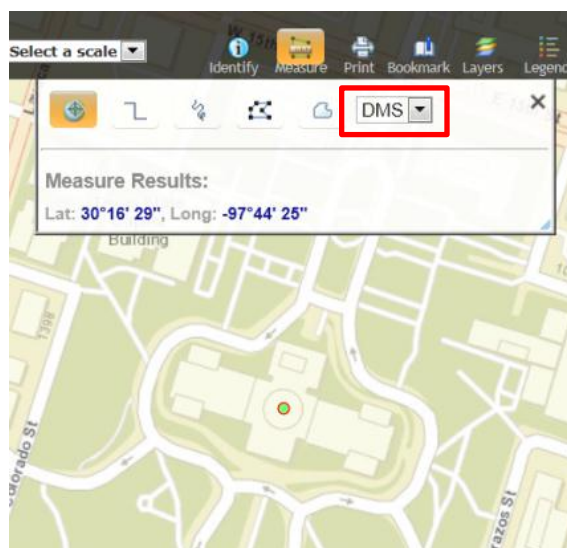
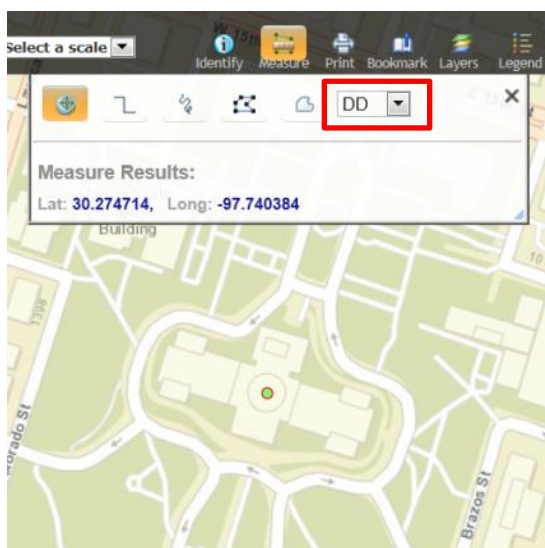
Measure


This tool allows you to obtain latitude-longitude coordinates of point locations or measure distances in the display screen.

Clicking the measure tool displays a window with multiple options for measurement:



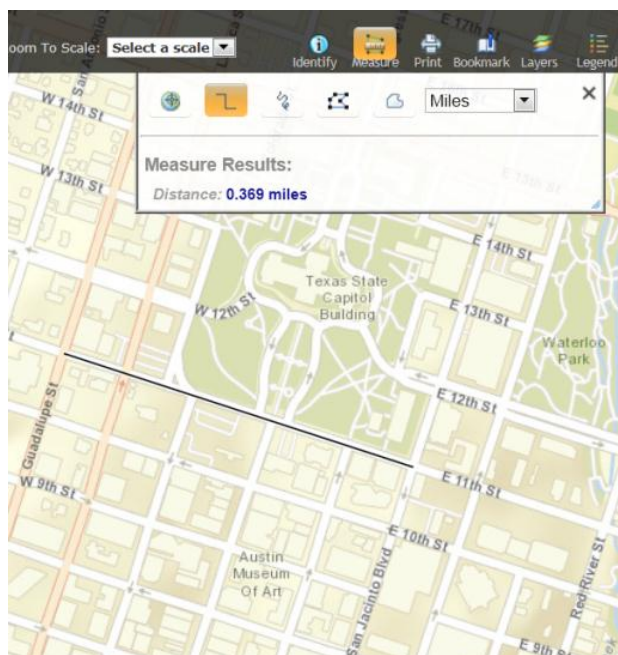
 **Location.** This tool allows you to obtain latitude-longitude coordinates for point locations. You may choose to display latitude-longitude coordinates in decimal degrees (DD) or as degrees-minutes-seconds (DMS).




 **Measure Distances.** Use this tool to measure linear distances between point locations.

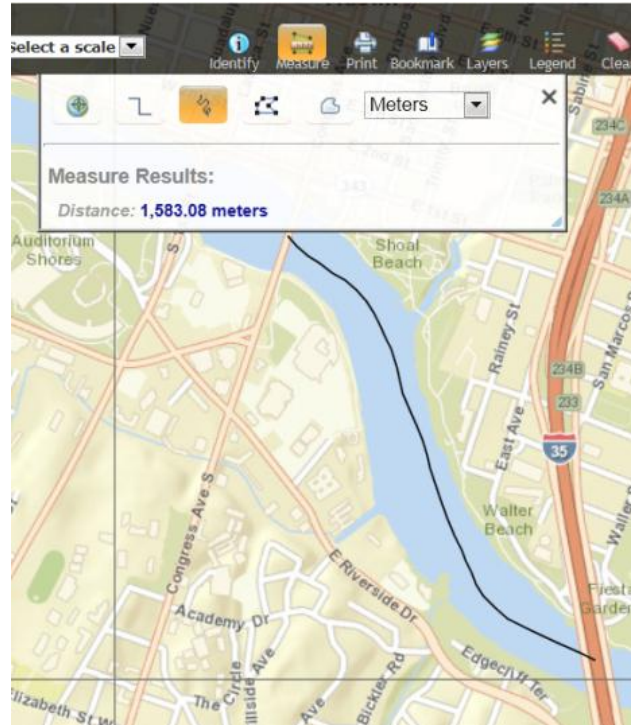
In the example to the right, the distance between Guadalupe Street and San Jacinto Boulevard on 11th Street in Austin is 0.369 miles. (You can also measure distances in yards, feet, kilometers, and meters.)


You can measure the distances of multiple connected straight lines. Make a single click at individual points, and do a double click when you're done.



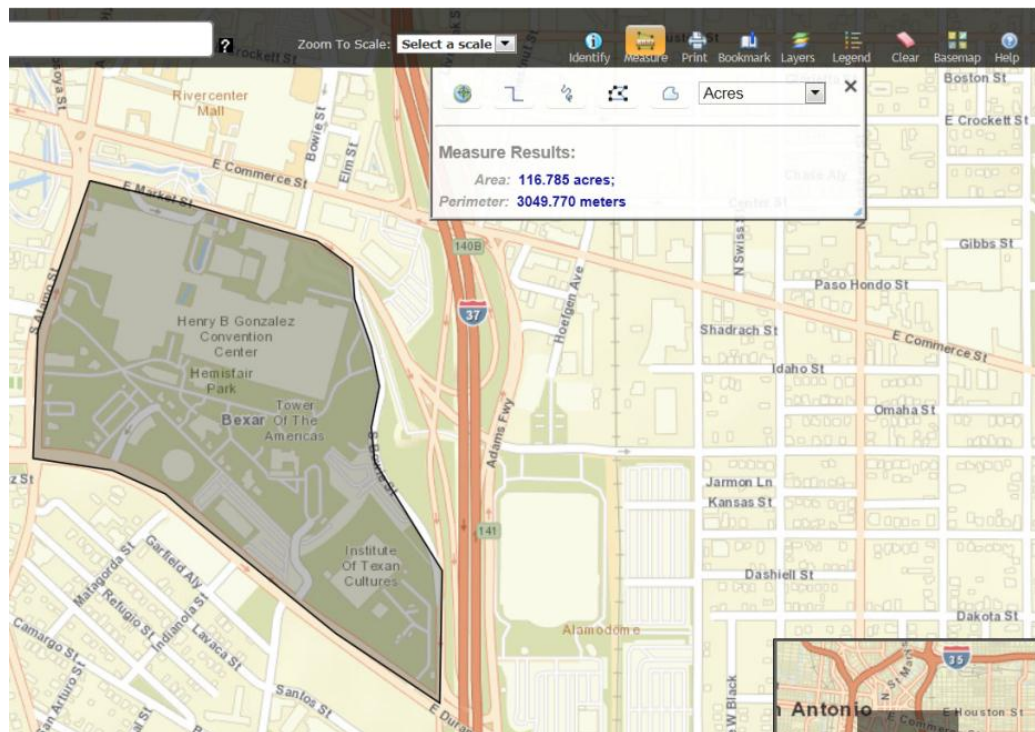
 **Freehand.** Use this tool to measure distances between two points that do not fall on a straight line.


In the example to the right, the distance between South Congress Avenue and Interstate Highway 35 on Lady Bird Lake in Austin is 1,583.08 meters.



 **Measure an Area.** Use this tool to measure the total area of a polygon (in acres, or square miles, yards, feet, kilometers, or meters).

In the example below, Hemisfair Park in San Antonio has a total area of 116.785 acres and a perimeter of 3049.770 meters.



 **Measure an Area (Freehand).** Use this tool to measure the total area of a freehand-drawn polygon (in acres, or square miles, yards, feet, kilometers, or meters).

Note: This tool can only be used to obtain measurements for simple polygons; if you attempt to draw a polygon with too many points, it will not provide a measurement of its area.

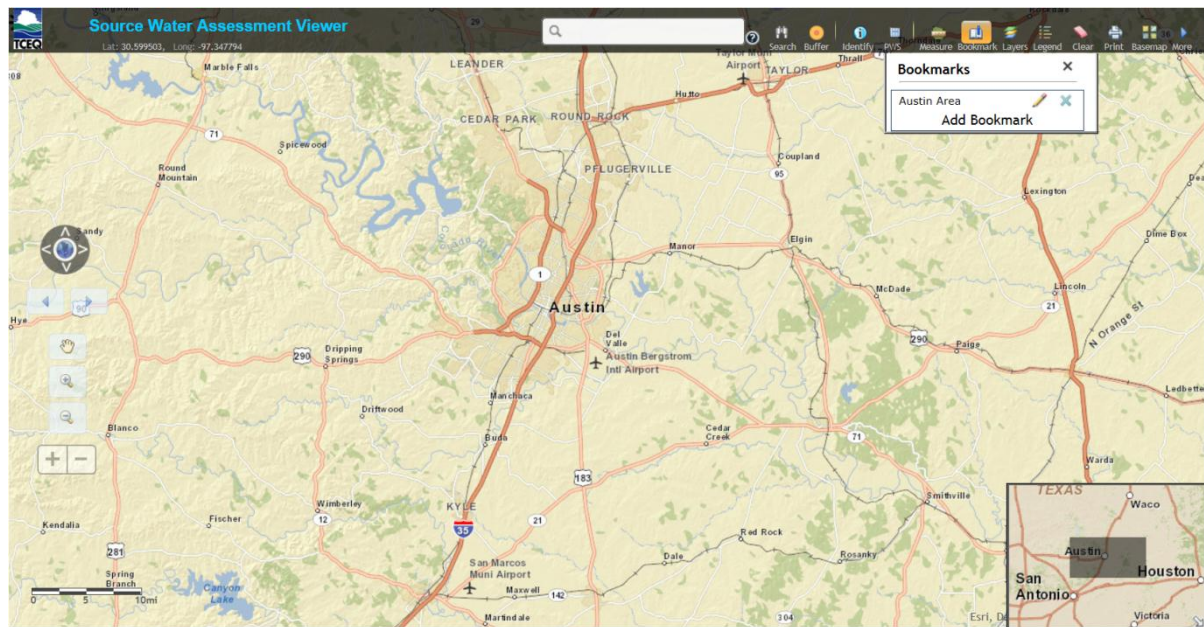
Bookmark

This tool allows you to create bookmarks for specific areas. A bookmark for the Austin area is already in place (displayed below).

To create a bookmark, zoom to the area of interest and click on the **Add Bookmark** command. Enter the name of the area and hit Enter.

To edit a bookmark, click on the pencil icon and make the desired changes.

To remove a bookmark, click on the blue X.

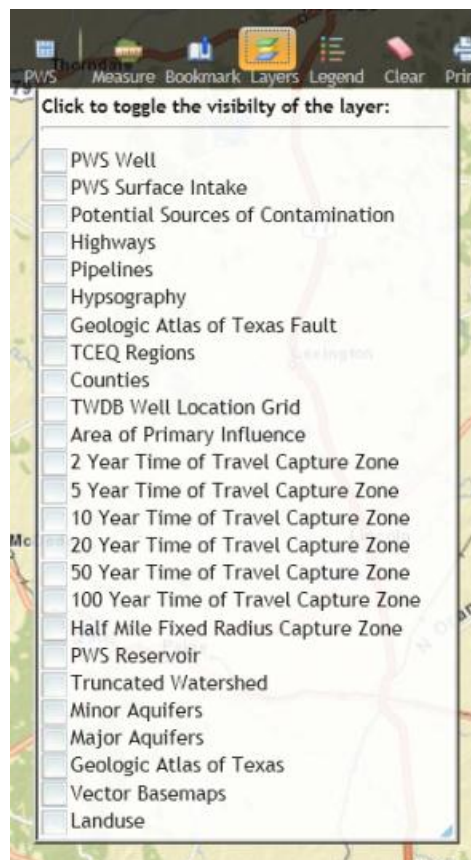


Layers

This tool allows you to choose the layers that the viewer will display. Clicking on the box to the left of the layer name will toggle the layer on or off.

(When you open the viewer, the **PWS Well** and **PWS Surface Intake** layers will already be selected.)

Note that different layers will become visible at different scales. If you select a layer but it does not display on the viewer, you may need to zoom in to a larger scale (displaying a smaller geographic area) before the layer appears.



Legend

Clicking on this tool will display the symbols for the layers you chose to display using the Layers tool.

If you have selected no layers, or if you are viewing the map at a scale in which the layer does not display, clicking on the Legend tool will display an empty screen with the heading “No legend”.

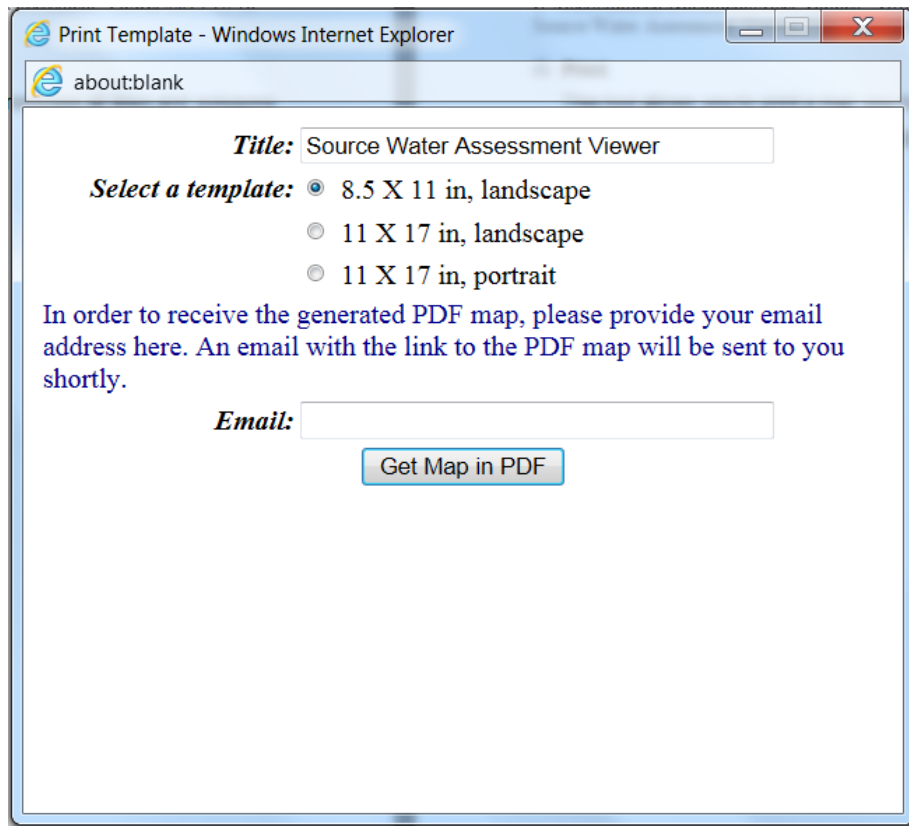
Clear

Most commonly used with the **Measure** tool, this tool removes all lines and polygons you have drawn on the viewer screen.

Print

This tool allows you to print a map you have created.

When you click on the tool, the following window will appear:



Title:

Select a template: ☒ 8.5 X 11 in, landscape
☐ 11 X 17 in, landscape
☐ 11 X 17 in, portrait

In order to receive the generated PDF map, please provide your email address here. An email with the link to the PDF map will be sent to you shortly.

Email:

Enter the map **Title** and your **Email** address in the spaces provided, select the template, and click on the **Get Map in PDF** button.

The viewer will send you an e-mail with the map attached in PDF format.

Basemap

Clicking on this tool brings up a window that allows you to choose from six different basemap layers:

- Streets
- Imagery
- USGS Topographic Maps
- Terrain
- Light Gray Base
- OpenStreetMap



▶ **More**

Clicking on the More arrow opens a new window with links to multiple web pages, zipped files of spatial data layers, or documents:

More Information Available

▶ **Additional Resources:**

[Source Water Assessment](#)

[Source Water Protection](#)

[PSOC Codes](#)

▶ **Available Layers for Download:**

 [PWS Wells and Intakes](#)

 [Surface Water Watersheds](#)

 [Well Capture Zones](#)

▶ [**PSOC Legend**](#)

▶ [**User Guide**](#)

Clicking each of these links displays a new window.